

Date: Wednesday, 09/07/2008 1:19:27 PM
User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : STEM
Job Number : 40403 Part Number : D3803T
Estimate Number : 13457 Drawing Number : D3803 PREL
P.O. Number : Project Number : N/A
This Issue : 09/07/2008 S.O. No. : Drawing Revision : PREL
Prsht Rev. : NC Material :
First Issue : 11 Type : MACHINED PARTS Due Date : 16/07/2008
Previous Run : Qty: 40 Um: Each
Written By :
Checked & Approved By :
Comment : Est Rev:A New Issue 08-07-09 JLM Verified By:EC

Additional Product

Job Number:

Seq. #:	Machine Or Operation:	Description :
1.0	M174R0750	Inventory
Comment: Qty.: 0.4725 f(s)/Unit Total : 18.9000 f(s) M17-4 SS.750" ROUND BAR BATCH: <u>M105710</u>		
2.0	DOOSAN LATHE	DOOSAN LATHE
Comment: Doosan Lathe 1- Turn as per Folio FA760 Rev: <u>per</u> & Dwg D3803 Rev: <u>per</u> 2-Deburr per dwg D3803		
3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
Comment: INSPECT PARTS AS THEY COME OFF MACHINE		
4.0	QC8	SECOND CHECK
Comment: SECOND CHECK		
5.0	PACKAGING 1	PACKAGING RESOURCE #1
Comment: PACKAGING RESOURCE #1 Identify and Stock Location: _____		

POSITIVE RECALL

EFFECTIVE 08/07/09

RELEASED h

AUTH h

DATE

08/07/09 per EC N08.507

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 09/07/2008 1:19:27 PM

User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEM

Job Number: 40403

Part Number: D38031

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



Lu 08,08,07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:
Description: Crosstube Assembly		Part Number:
Inspection Dwg:	Rev:	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

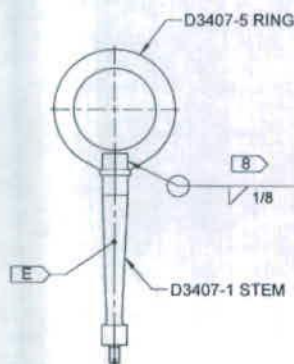
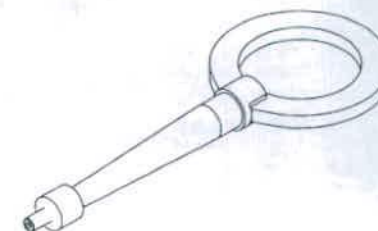
☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	.003	+/- .010	.003			
	.125 ID	+/- .010	.125			
	1/4 - 28 2A		1/4 - 28 - 2A			
	.363	+/- .010	.360			
	.625	+/- .010	.630			
	.625	+/- .010	.628			
	.625	+/- .010	.625			
	R.100	+/- .010	R.100			
	2.020	+/- .010	2.015			
	.750	+/- .010	.750			
	.500	+0 - .010	.495			
	3.500	+/- .010	3.5			
	.150	+/- .010	.150			
	.500 ref.	+/- .010	.5			
	.550	+/- .010	.550			
	4.500	+0 - .010	4.495			
SIDE B	.350	+/- .010	.348			
	5.400	+/- .010	5.402			
	.250	+ .010 - 0	.255			
	.625	+/- .010	.630			

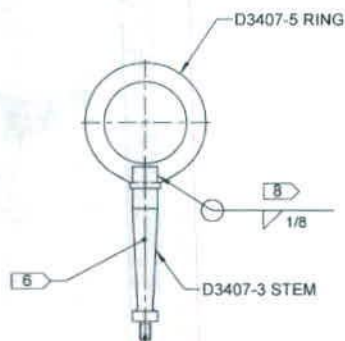
Measured by: <i>RD</i>	Audited by: <i>JS</i>	Prototype Approval:	N/A
Date: 08/07/17	Date: 08/07/22	Date:	N/A
Rev	Date	Change	Revised by
A		New Issue	KJ/JLM
			Approved

QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM

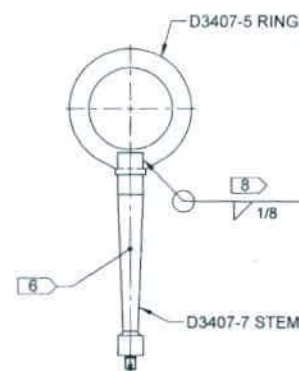
REFERENCE ONLY



D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING



RELEASED

NOTES:

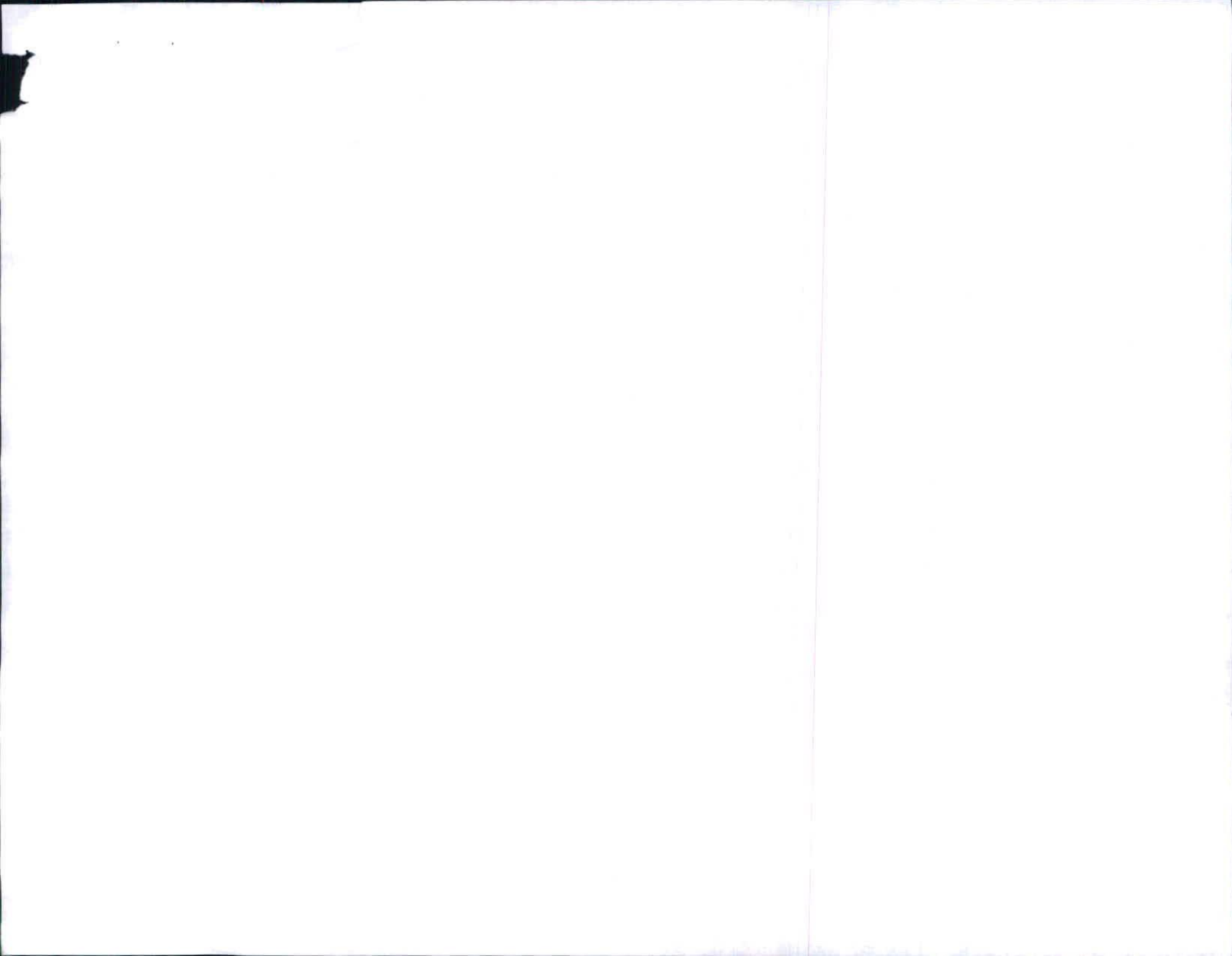
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

REV	DESCRIPTION	BY	DATE
E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/3 LONGER FOR FIT W/ WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.23		

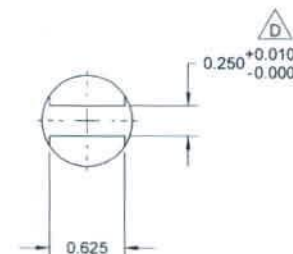
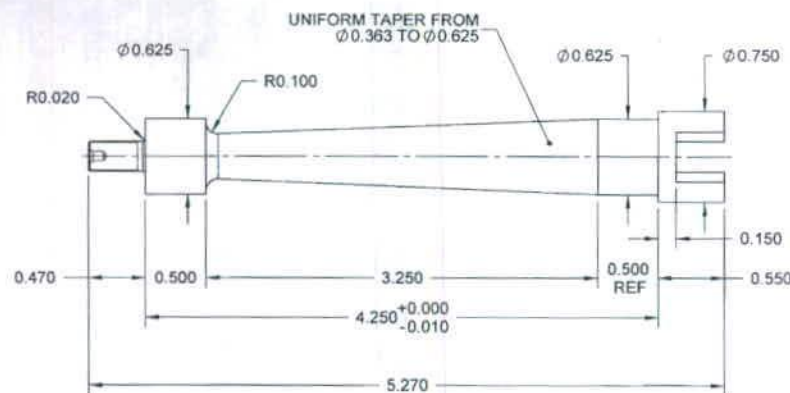
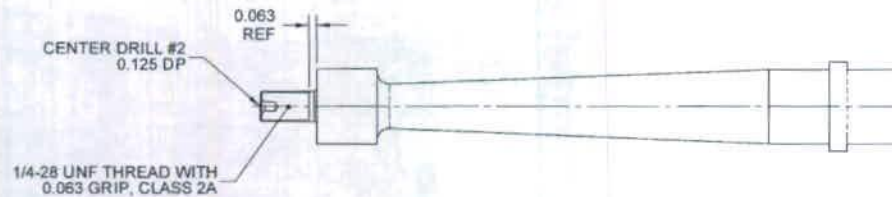
DART AEROSPACE USA, INC.
PORT HADLOCK, WA.

DRAWING NO.
D3407
TITLE
TOW RING
REV. E
SHEET 1 OF 5
SCALE
NTS

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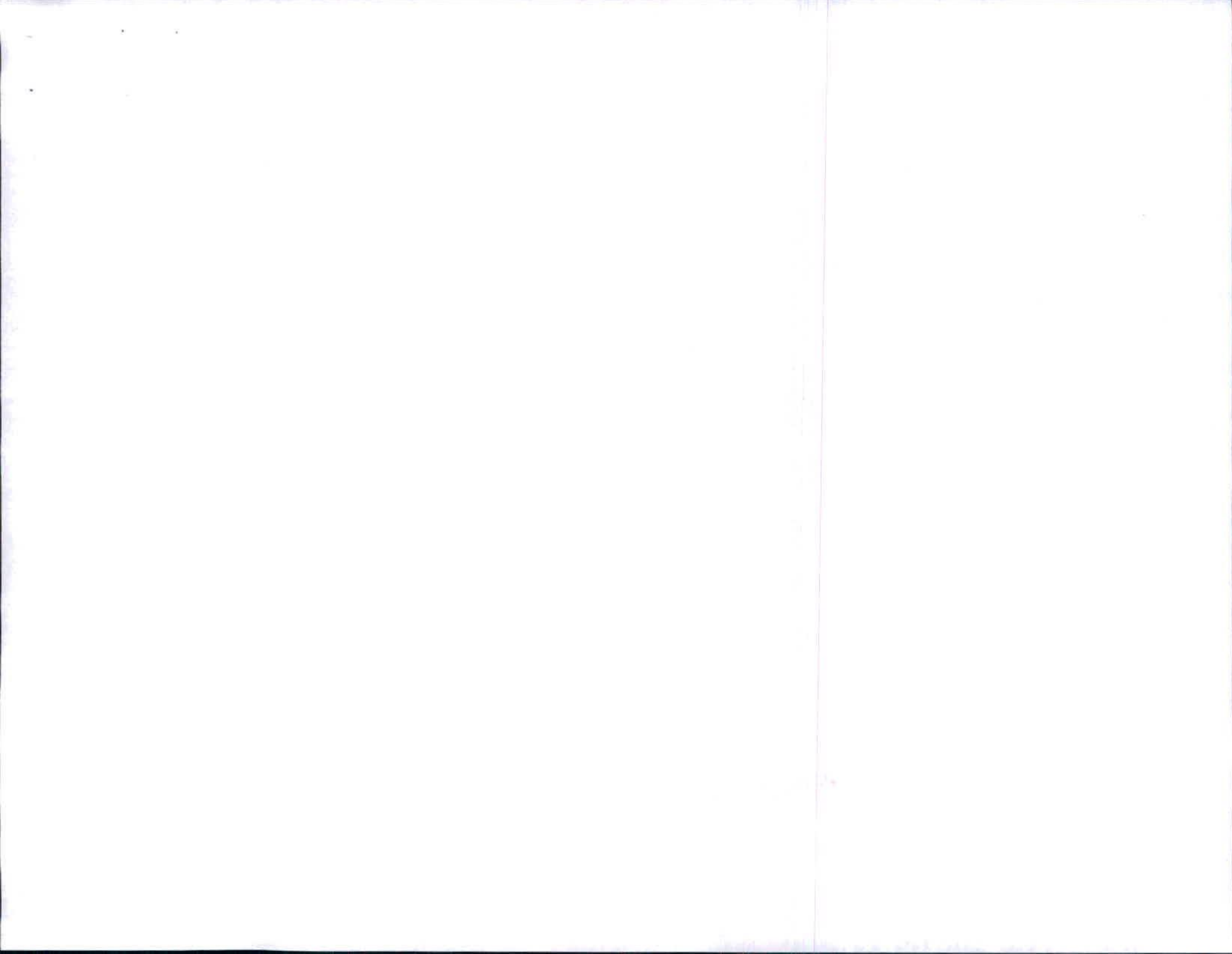
D3407-1 STEM

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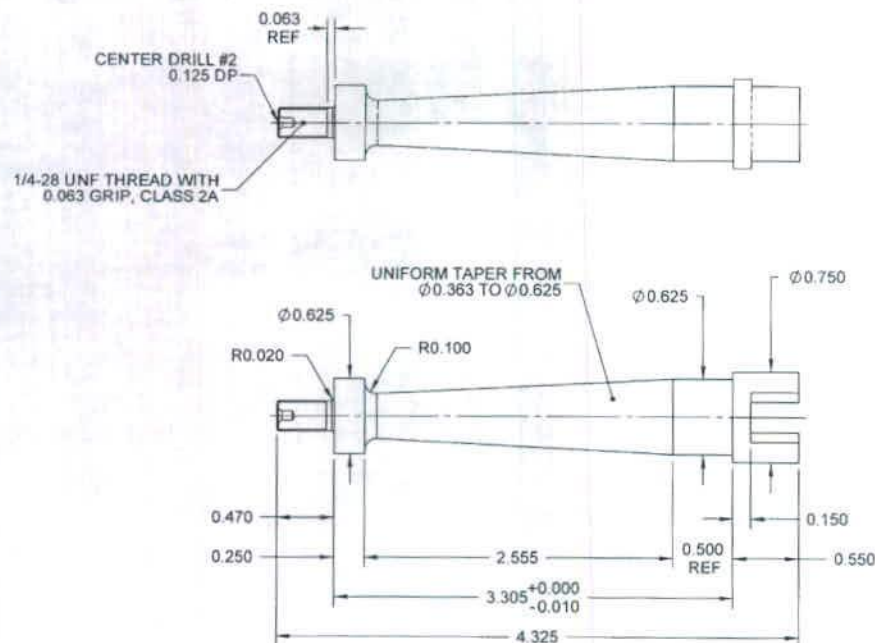
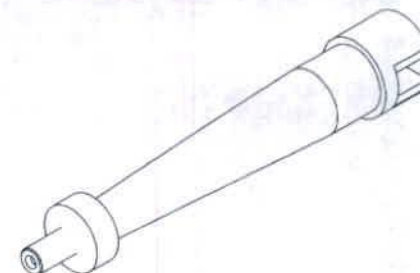
NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.33 lbs

DESIGN		DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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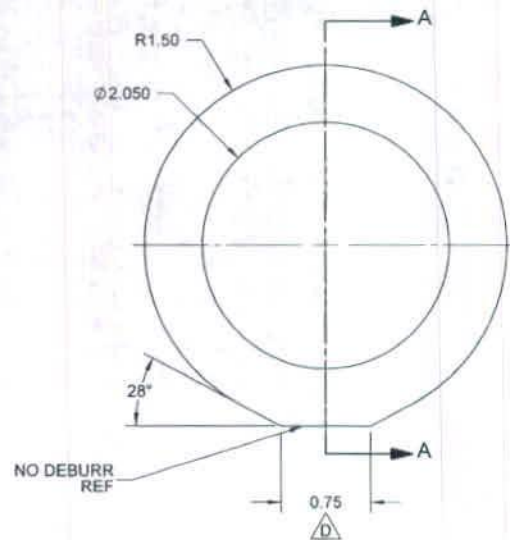
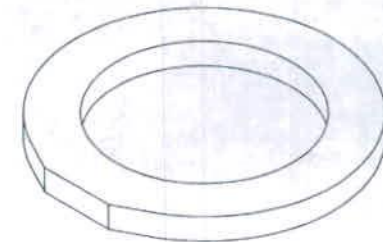
D3407-3 STEM

RELEASED

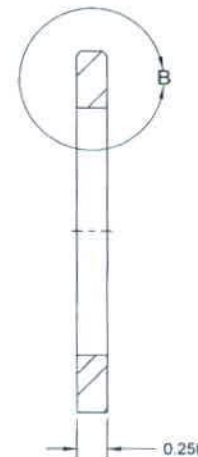
- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	40	DART AEROSPACE USA, INC.	
DRAWN	104	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3407	REV. E
MFG. APPR.		TITLE	SHEET 3 OF 5
APPROVED		TOW RING	SCALE
DE APPR.			NTS
DATE	08.07.23	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.	

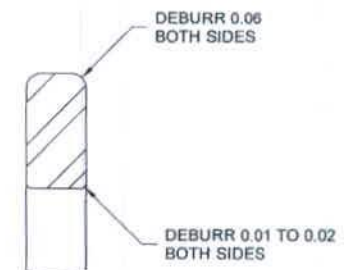
REFERENCE ONLY



D3407-5 RING



SECTION A-A

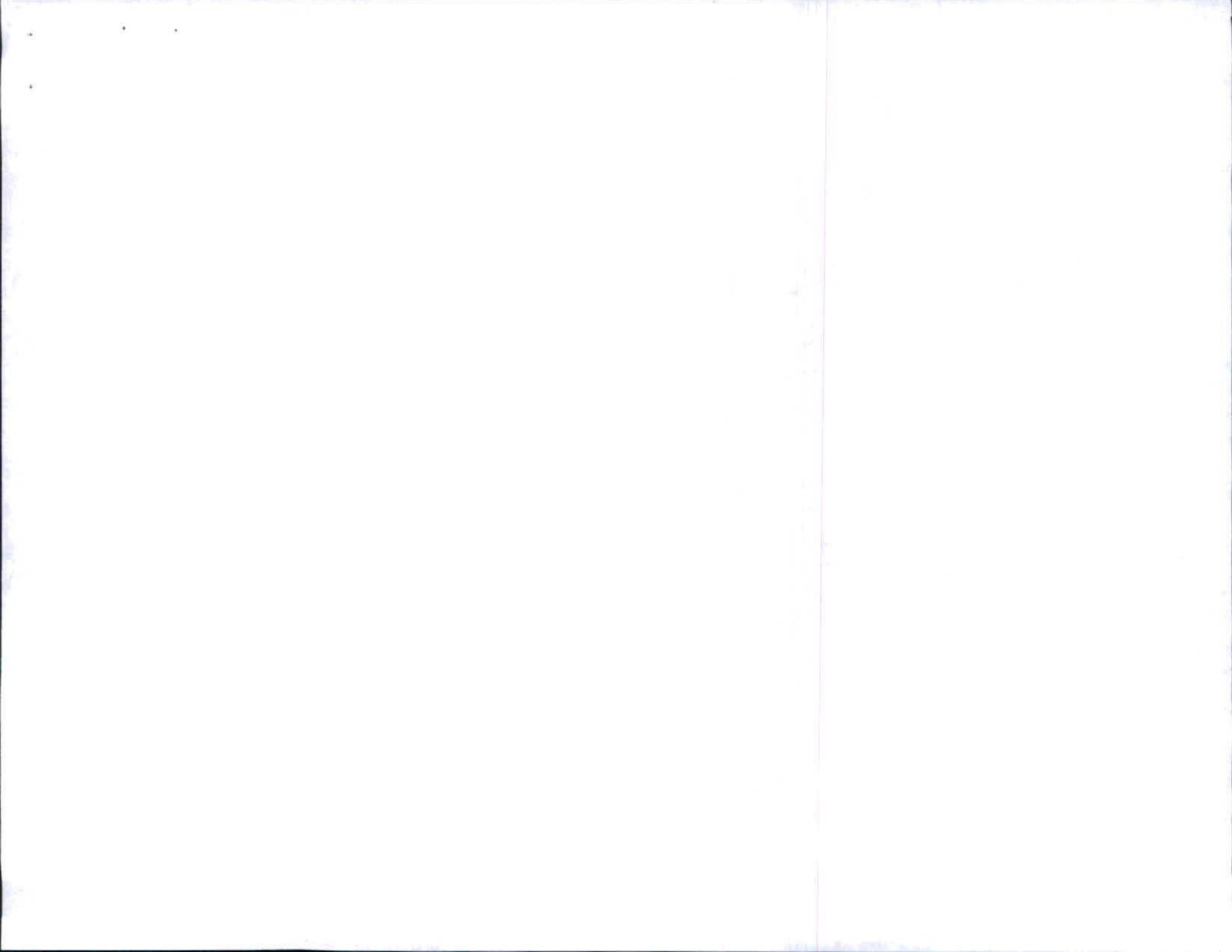


DETAIL B
SCALE 2X

RELEASED
08-07-23

- NOTES:
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

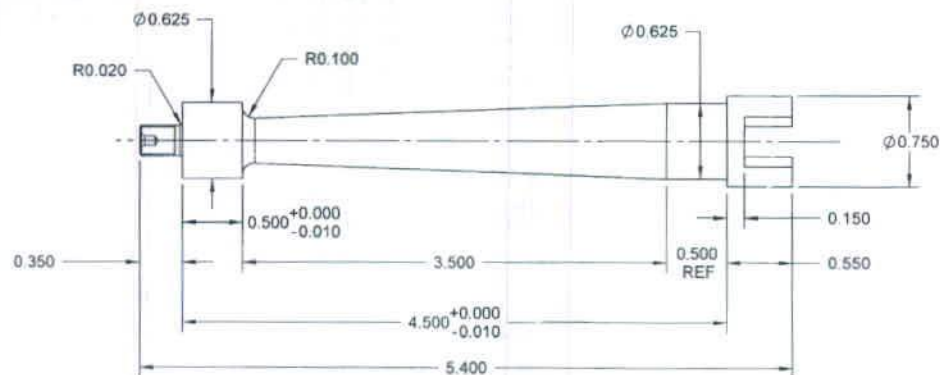
DESIGN	42	DART AEROSPACE USA, INC.	
DRAWN	1/18	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 4 OF 5
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DE APPR.		TOW RING	NTS
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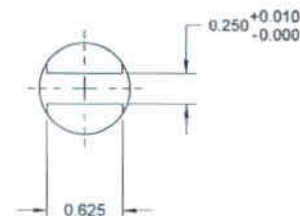
REFERENCE ONLY

0.063
REF
CENTER DRILL #2
0.125 DP

1/4-28 UNF THREAD WITH
0.063 GRIP, CLASS 2A



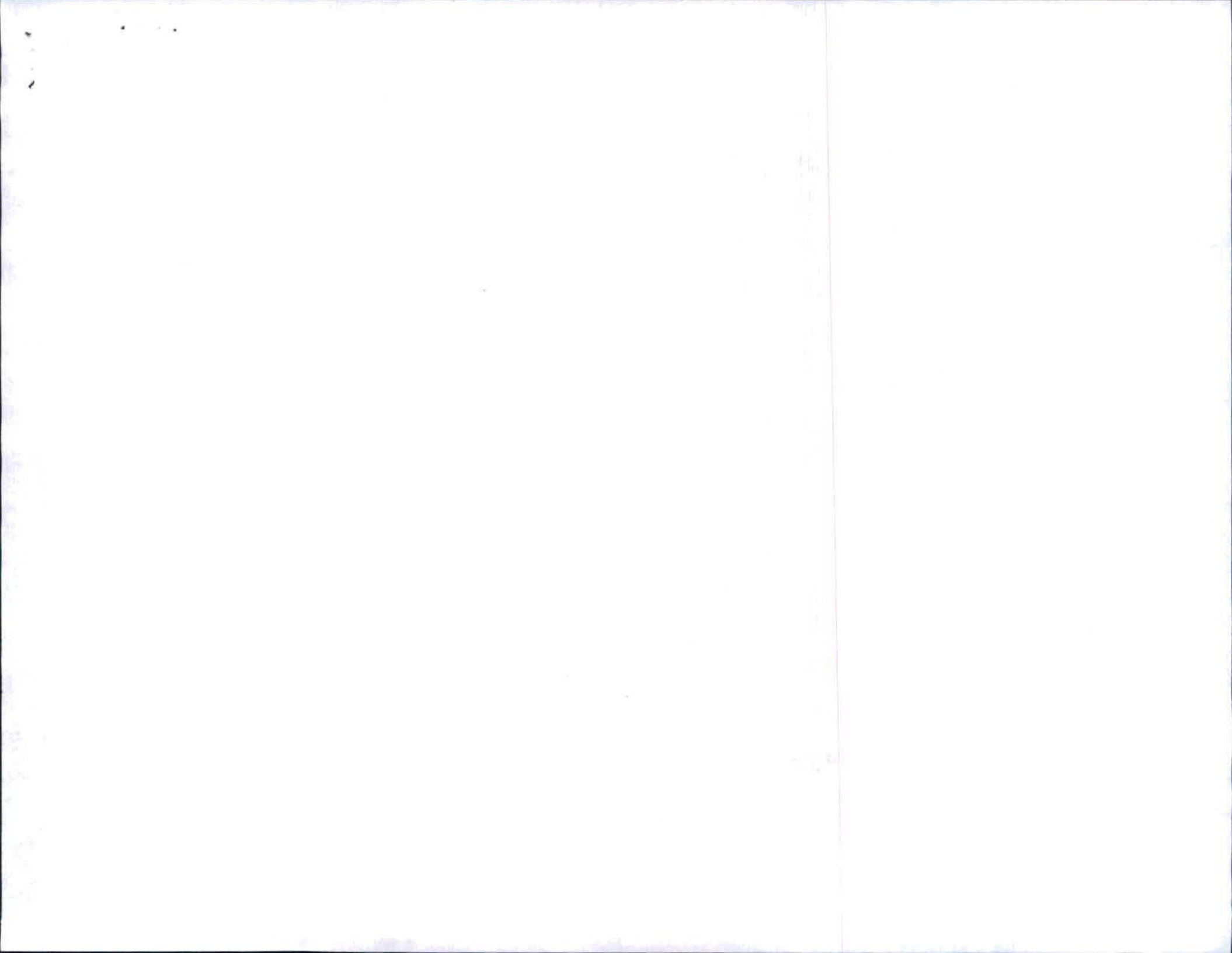
D3407-7 STEM



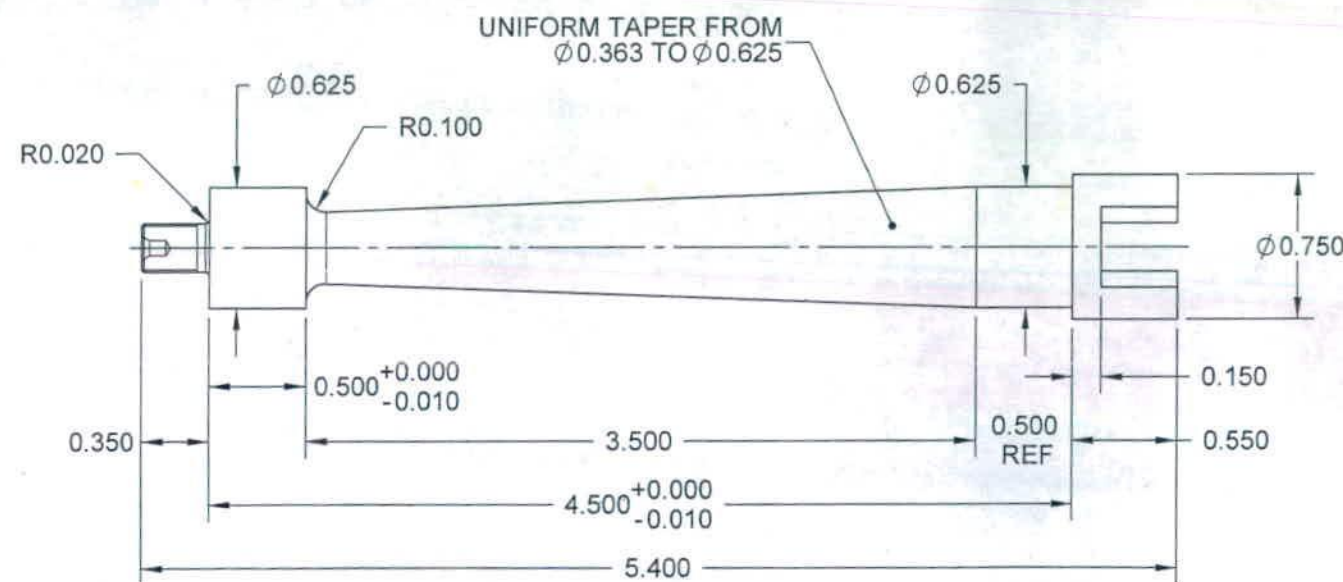
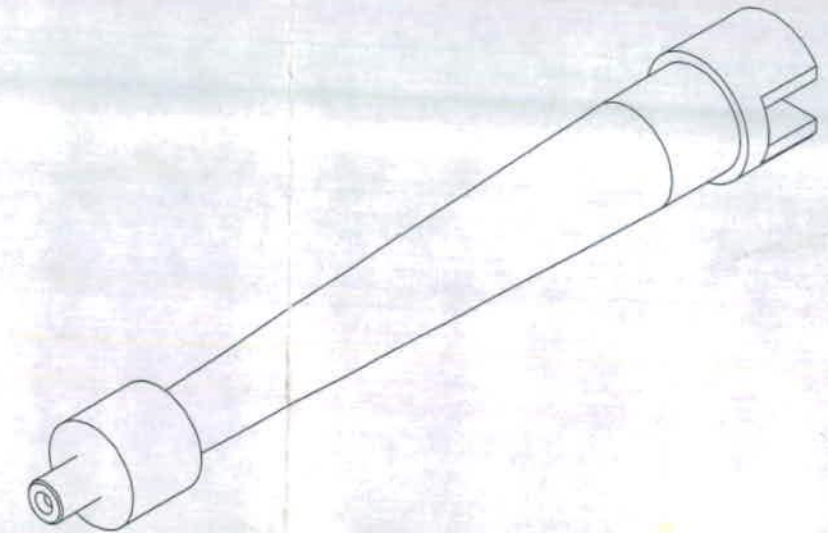
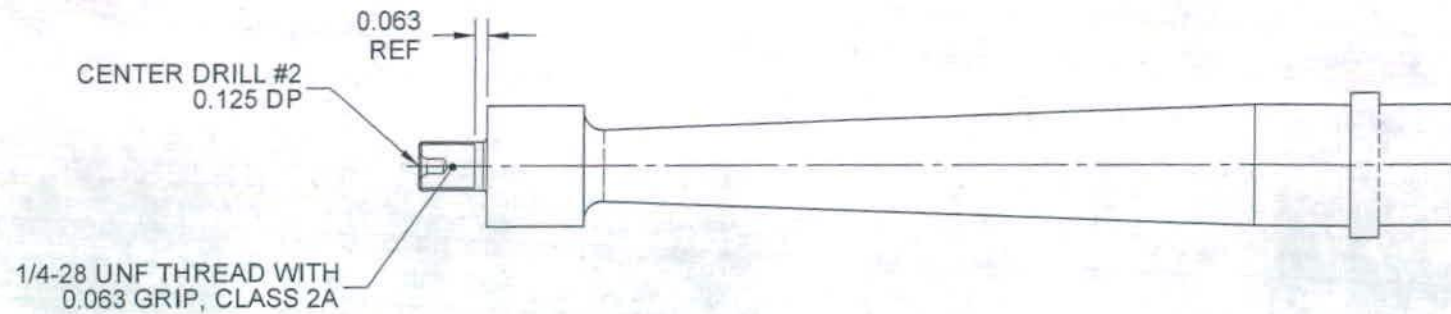
- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.34 lbs

RELEASED
08-07-23

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	JPM	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 5 OF 5
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8 7 6 5 4 3 2



D3803-1 STEM

PRELIMINARY ISSUE
AJS 08.07.05

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.34 lbs

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3803	SHEET 2 OF 2
APPROVED		TITLE	TOW RING ASSEMBLY
DE APPR.		(204/205/212/412)	SCALE
DATE	08.07.08		NTS
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JAN 12 1906